17. WARRANTY

Royal Sovereign International warrants the equipment sold is free from defects in material and workmanship for a period of One (1) year for Parts and Labor from the date of installation, excluding lamination rollers which are warranted for Six (6) months. This warranty is extended only to the original purchaser. This warranty is the only warranty made by Royal Sovereign International and cannot be modified or amended. Royal Sovereign's sole and exclusive liability and the customer's sole and exclusive remedy under this warranty shall be, at Royal Sovereign's option, to repair or replace any such defective part or product. These remedies are only available if Royal Sovereign's examination of the product discloses to Royal Sovereign's satisfaction that such defects actually exist and were not caused by misuse, neglect, attempt to repair, unauthorized alternation or modification, incorrect line voltage, fire, accident, flood or other hazard.

The warranty made herein is in lieu of all other warranties, expressed or implied, including any warranty or merchantability or fitness for a particular purpose. Royal Sovereign will not be liable for personal damage or personal injury (unless primarily caused by its negligence), loss of profit, or other incidental or consequential damages arising out of the use or inability to use this equipment.

LIMITED WARRANTY

This warranty specifically does not cover damage to laminating rollers caused by knives, razor blades, or any sharp objects or abrasives, or failure caused by adhesives, or damage caused by lifting, tilting and/or any attempt to position the machine other than rolling on the installed castors or feet on even surfaces, or improper use of the machine. Warranty repair or replacement by Royal Sovereign or its authorized Reseller(s) does not extend the warranty beyond the initial one year period from the date of installation. Unauthorized customer alterations will void this warranty.

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RS Royal Sovereign

OWNER'S MANUAL

RSL-2702 Laminator

Read all instructions carefully before use.
For any Customer Support needs please choose the
Customer Support tab on *www.royalsovereign.com*

Royal Sovereign International Inc.
www.royalsovereign.com

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1. INTRODUCTION

Thank you for choosing a Royal Sovereign laminator. It has been designed and manufactured to provide years of continuous service. For complete operating and maintenance information please read this manual thoroughly. Upon receipt of your laminator, please inspect the box, the machine and all other contents for shipping damage. Damage should be brought to the immediate attention of the delivering carrier (See page 20 for list of shipment elements).

2. SAFETY PRECAUTIONS

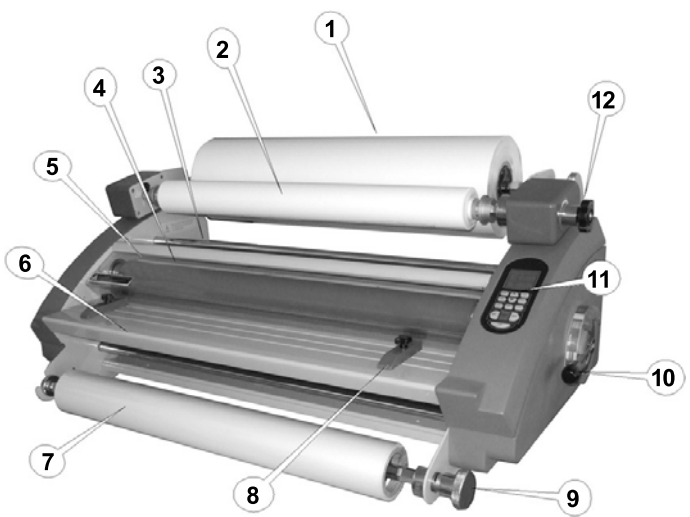
Failure to comply with any of the following safety procedures could result in serious injury. Please read the instructions carefully and keep for future reference.

1. Only a licensed electrician should install wiring and outlet for the laminator.
2. Ensure the unit is plugged into a properly grounded outlet with the correct voltage.
3. Keep hands and clothing (i.e. Neckties) away from rollers.The rollers are pinch points that can trap body parts or clothing and cause serious injury.
4. Keep flammable and wet objects away from the machine.
5. Place machine on a level surface.
6. Avoid excessive sunlight, humidity and extreme temperatures.
7. Ensure the unit is turned off, cooled, and unplugged from the outlet prior to moving and/or repairing.
8. Keep out of reach of children.
9. Only Royal Sovereign authorized maintenance and service technicians should make repairs.
10. Do not attempt to laminate items that exceed total recommended material thickness for the unit
11. When cleaning the machine, don't use flammable sprays or materials.
12. Do not touch the rollers when they are hot or place foreign objects inside the machine.
13. Do not cover the surface of the machine until the machine has completely cooled.

3. INSTALLATION

RS Roll Laminator Line is advanced laminators with time transcendental design,utilizing the latest in laminating technology. It is designed for you to set temperature and speed as necessary and have the machine remember your settings. It is also designed for convenience by anyone through the simple procedure of adjusting film tension in accordance with the thickness of film and materials to be laminated.

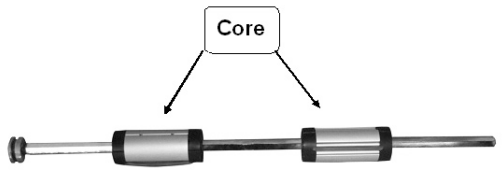
4. MAJOR PARTS OF MACHINE



NO	PART NAME	NO	PART NAME
1	UPPER FILM	7	LOWER FILM
2	TAKE-UP BOBBIN	8	GUIDE-DOCUMENT
3	IDLE BAR	9	HANDLE-TENSION
4	HOT ROLLER	10	PRESSURE LEVER
5	SAFETY COVER	11	CONTROL PANEL
6	TABLE-FRONT	12	KNOB-TENSION

5. SETTING UP FILM

Picture 1



Picture 2

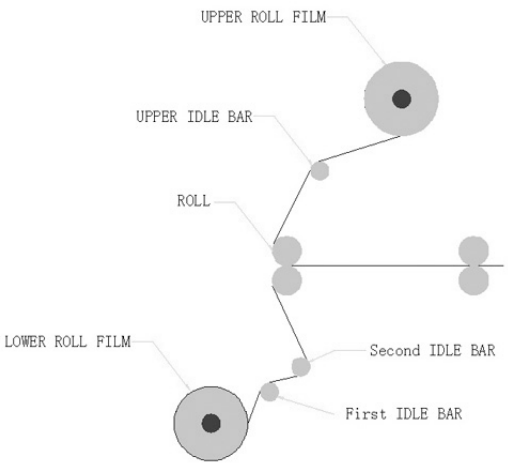
Picture 3

Picture 4

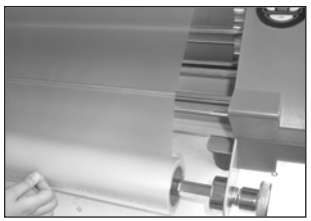
1. As shown in picture 1, insert cores into the upper/lower film shaft.
2. As shown in picture 2 ,using the special tool,fix cores on the film shaft with set-screws.
3. Set the glossy side of upper/lower film to face the heat.
   (Glossy side is PET film and matte side is thermal polymer laminating film)
4. Center film as shown in picture 3 and 4

6. THREADING FILM

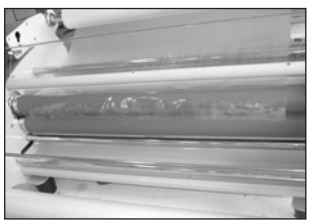
6.1. HOT FILM



1. Turn the power switch on("I" position).Power switch is located in the rear of the unit on the left side.
2. Complete the steps on " Loading films to upper and lower film shafts" - Page 4
3. Set the rollers temperature to the recommended film temperature.
4. Take off the Front Table.
5. Pull down the upper film over the Safety Cover to the lower film; align and center the lower film to upper film (Picture 1).
6. Rewind the upper film back until the film aligns with the Safety Cover.
7. Thread the film over the Upper Idle Bar and underneath the Safety Cover until the film rests on the upper roller (Picture 2).

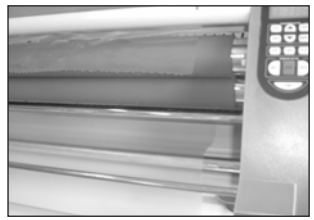


Picture 1

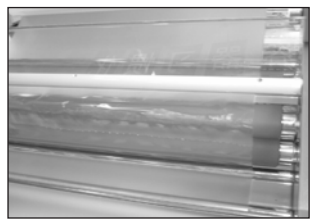


Picture 2

8. Carefully pull up the laminate from the lower roll up the first Idle bar and then around the back side of the second Idler (Caution: lower roller may be hot).(Picture 3)
9. Tack the lower film to the upper film that is resting on the main roller (Picture 4).
10. Reinstall the Front Table,close the Safety Cover.
11. Adjust the nip setting to 1/4" (6mm).
12. Insert and push the leader boards on each end until boards reach the front nip point.
13. Adjust the nip setting to "Laminating" mode.
14. Push the Run button.
15. Push the leader boards between the pair of main rollers (Picture 5).
16. Press the Run button and adjust the supply roll tension knobs by rotating clockwise or counterclockwise. Turn it until the supply roll films have some resistance (the tension varies depending on the film thickness; the thicker the film the more tension is required) (Picture 6).
17. Press Stop button when the leader board has completely exited the rear of the unit.
18. Use the Cross Cutter to cut the leader board from the web (see page 18).
19. Peel off the film from the board for reuse.
20. Set the roller nip setting to the appropriate position for the lamination or encapsulation application.

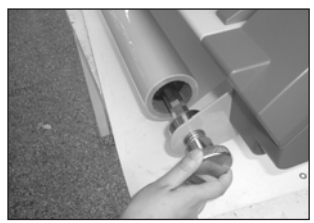


Picture 3



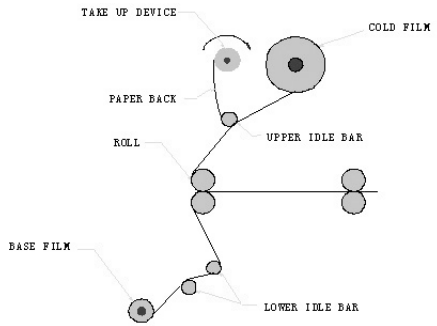
Picture 4

Picture 5



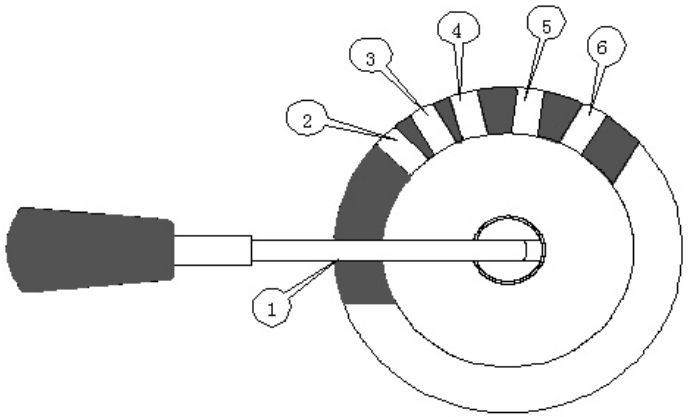
Picture 6

6.2. COLD FILM



1. Follow the steps in the "Loading Film" procedure by loading the upper shaft with pressure sensitive film, e.g. (Royal Print-Pro Film) and lower shaft with pressure sensitive mounting adhesive films, e.g.
   (Royal Sovereign White-Mount or Clear-Mount).
2. Pull the upper laminate under the upper idle bar and separate the release liner from the laminate.
3. Tape the release liner to the Take-Up Paper Core and allow the laminate to hang over the main rollers.
4. Pull up the mounting adhesive and tack it to the laminate hanging over the rollers (do not use the Lower Idle Bar).
5. Reinstall the Front Table,close the Safety Cover.
6. Adjust the nip setting to 1/4"(6mm).
7. Insert and push the leader board until board reaches the nip point.
8. Press the Run button and adjust the supply roll tension knobs by rotating clockwise or counterclockwise. Turn it until the supply roll films have some resistance
   (the tension varies depending on the thickness of a film; the thicker the film the more tension is required).
9. Press Stop button when the leader board has completely exited the rear of the unit.
11. Use the Cross Cutter to cut the leader board from the web(see page18).
12. Set the roller nip setting to the appropriate position for the lamination application.

7. CONTROL OF ROLLER PRESSURE



— Methods of controlling pressure of the roller —

For setting, pull the pressure lever out and turn the lever to following the indication.

①. OPEN : for detaching and cleaning rollers.
②. 6MM : for laminating 6mm[0.24in] thick board.
③ 5MM : for laminating 5mm[0.2in] thick board.
④. 3MM : for laminating 3mm[0.12in] thick board.
⑤. 1.5MM : for laminating 1.5mm[0.06in] thick board.
⑥. LAMINATING : for laminating 25~250micron thick film and cold film.

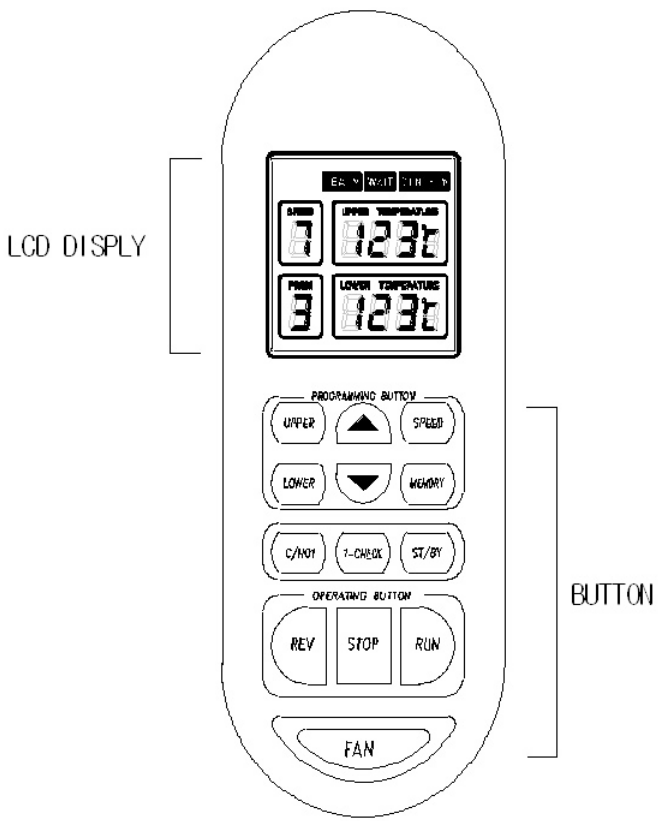
— reference —

For FOAM BOARD laminating temperature setting
UPPER:150°C; LOWER:80°C; SPEED:1

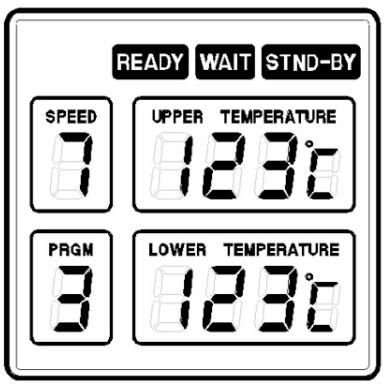
8. INSTRUCTIONS FOR CONTROL PANEL

We designed this machine standing by user's convenience. You can manipulate speed and temperature of rollers each by each by the LCD controller. And with memory function, you don't need to set machine every time you laminate

Terms

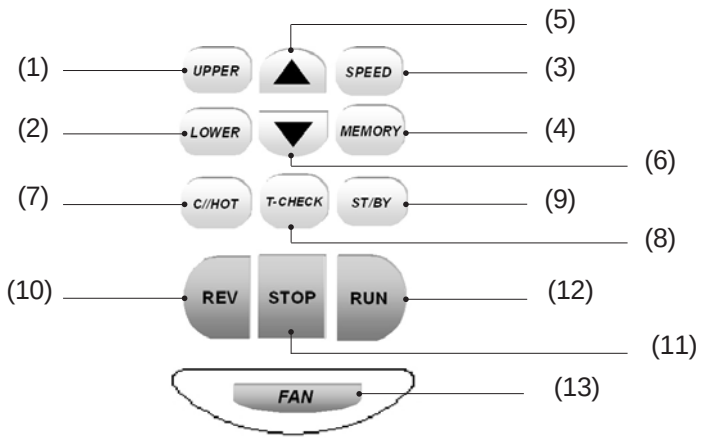


8.1. LCD WINDOW



1. Initial display status.
   It displays you the last working condition when turned on.
2. READY
   Is displayed when the preset temperature is reached.
3. WAIT
   Blinking Indicates to wait till blinking stops.
   Current temperature is higher or lower than the preset temperature.
4. STND-BY
   Saving electricity status.
5. Temperature
   1) Shows the preset temperature.
   2) You can check the current temperature on the hot rolls by pressing T-Check.
6. Speed
   9 different speed option.
   (SPEED1-> 0.3m(0.98ft)/min.
   SPEED9-> 2.5m(9.52ft)/min.)
   You can choose from 1 to 6 for Cold Function.
   You can choose speed 1 for FOAM BOARD laminating
7. PRGM
   9 different memory cell (address).
   You can memorize 9 different working conditions.

8.2. FUNCTIONS OF BUTTONS

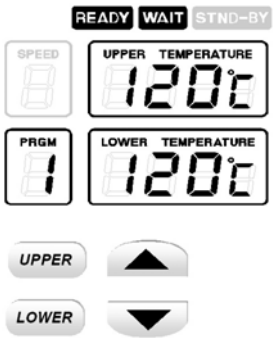


(1): Upper roller temperature controller.
(2): Lower roller temperature controller.
(3): Speed controller.
(4): Choose memorized working condition.
(5): ① Increase temperature.
② Increase speed.
③ Restore the memorized working setting.
(6): ① Decrease temperature.
② Decrease speed.
③ Restore the memorized working setting.
(7): Cold and Hot mode change.
(8): Check current temperature.
(9): Saving electricity while the machine is not being operated.
(10): Reverse function.
Stay pressing reverse button to have the roller run backward.
(11): Stop working.
(12): Run the rollers.
(13): Run and stop the fans.

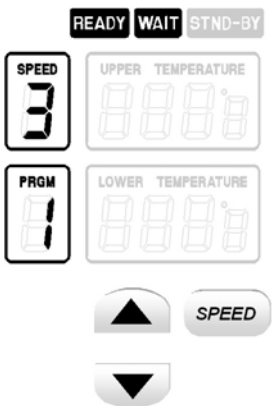
8.3. HOW TO USE BUTTONS

— Set the upper/ lower hot rollers —

Button & Display



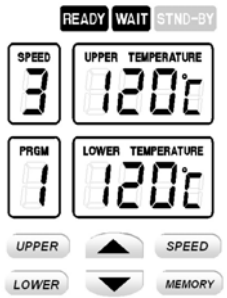
1. Temperature available range from 0°C (32°F) to 150°C (302°F).
2. Temperature setting of upper roller.
   Press UPPER and you will see the LCD screen is blinking 6 times. Before blinking is finished, press ▲ or ▼ to set the temperature.
3. Set temperature of lower roller.
   Press LOWER and choose the arrow button the same way to set temperature of upper roller.
4. ▲ ▼ Each time you press the button,it will change 1°C (2°F). If you press the button more than 1 seconds, temperature will change automatically until you press the button again.
5. Buzzer is ringing each time you press the button.



— Speed controls —

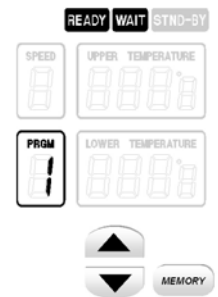
1. The operator can use 9 different lamination speeds.
2. Press SPEED button then speed display mode is blinking 6 times.
   Before blinking finish, the operator can change the speed with ▲ or ▼ .
3. Each time you press the button, buzzer will ring.

— Memorizing Working condition and Using the memorized working condition —



1. Memorize working condition.

1).Operator can memorize 9 working conditions.
2).Choose working condition by pressing ▲ and ▼ button after pressing MEMORY button. and speed,press MEMORY button.
3).It is memorized if buzzer is ringing with blinking.If you change the temperature or speed when LCD screen is still blinking, you have to press MEMORY button after changing.
4).When you memorize another working condition, you can do above 2 and 3 operation over.



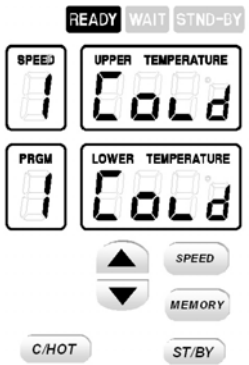
2. Use the memorized working condition.

1).Operator can choose one of 9 memorized working conditions.
2).Press MEMORY then ▼ or ▲ to select a working condition. The display will blink.
3).After the blinking stops, it is set the working condition you selected and shows the working condition on the display.

— Check current temperature on the hot rollers —

1.When you press T-CHECK button, the present temperature will be shown on the screen and will blink five times.
2.After this, it automatically returns to the previous state.

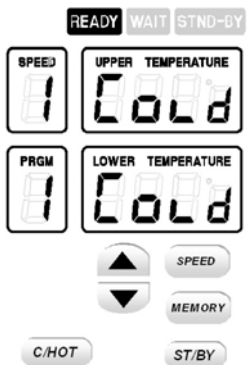
— Cold mode —



1.You can do cold lamination with this function.
2.Press the C/HOT button to show "Cold" on the display.
3.Speed will always show 1.
4.Speed can be varied 1 or 6 by selecting ▲ ▼ button.
5.You release the machine from cold mode by pressing C/HOT button.
6.Everytime you press the button, buzzer is ringing.
7.ST/BY mode is not working at COLD mode.

— STND-BY —

(Saving Electricity while you are not operating for a while.)



1. When press ST/BY button STND-BY will display on the screen and STND-BY mode is set at 80°C.
2. When machine is in STND-BY mode, machine condition wouldn't work. Press the ST/BY utton and it will revert to the previous working.
3. When machine runs, you can't change it to the STND-BY mode.
   In this case, press the STOP button and turn the machine to the STND-BY mode.

9. LAMINATING STEPS

9.1. HOT LAMINATING

1. Turn the power switch on the back side of the machine.
2. Set the pressure lever to the "Laminating mode".
3. Increase roller temperature. If you already memorized special working condition,press MEMORY button and choose right condition by using ▲ or ▼ button.
4. When it's ready, you will see ready sign on the screen and the buzzer will ring.
5. Press the RUN button. If rollers don't run, check the safety cover or the table front whether it is located at correct position or not.
6. To set film tension properly, use the Handle Tension. Lower tension would make better operation.
7. Set document on the table. You should allow at least 5mm(1/4") space on each side for perfect laminations.
8. Press the STOP button when your lamination is finished.
9. For your convenience, it would be better to set table guide in proper position.
10. When lamination is just finished, it is hot and easily bent. Try not to touch it until it cools down.
11. After finishing your work, set the pressure lever to the "OPEN".
12. Turn the Power switch off.

— Useful Information —

1. It would be easier for you to operate the machine next time if the temperature and the speed are set at the best condition and memorized by the using MEMORY function.
2. WAIT sign may appear on LCD window in the case continuous laminating. If it happens, the speed needs to be lowered by one speed level and started again after READY signal on the LCD window.
3. In case of wrinkling or rolling of film due to wrong position of document, REV is needed to be keeping pushed in order that document could come out to the front with buzzer sound.
4. When document is much smaller than film, you should place it in the middle of film for preventing wrinkle.
5. Use cooling fan when you laminate continuously without break and document is too hot.

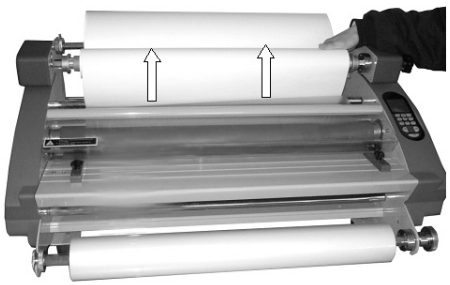
— Laminating Speed at each level(mm/min) —

SPEED	HOT / COLD MOLD
1	300
2	500
3	700
4	900
5	1100
6	1500
7	1800
8	2100
9	2500

The above laminating speed numbers are at the condition on regular voltage with almost no film tension. There might be the possibility for difference to the above numbers due to the change of voltage or adjustment of tension.

9.2. COLD LAMINATING

1. Put cold roll film on upper bar.(Set the same as method of HOT film for protect paper of lower part.)
2. Pull COLD film, and fix it so that backside protecting paper can be wound on take-up mandrel clockwise.
   (Revolve core to make protecting paper tight a little bit.)
3. Set pressure lever at the proper position following to your lamination condition.
4. After pressing the C/HOT button choose and set proper speed by using the SPEED and button.
5. It is READY when ready is show on the screen and the buzzer rings three times (sound three times).
6. Turn on the take up device and set the proper film tension by pressing the RUN button. Lower tension would make better operation.
7. Set document on the table.should allow at least 5mm(1/4") space on each side for perfect laminations



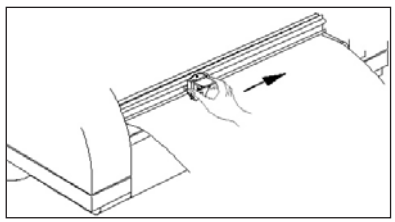
8. Press " Run "button and "take up motor" at the same time.The liner and film will be rolled at the same time.
9. When lamination is finished, press the STOP button. For your convenience, it would be better to set table guide in proper position. And if needed, cut documents with cross cutter.
10. Set pressure lever at the "OPEN" mode.
11. Turn off the power switch.

— Reference —

1.Set up the protection paper. Otherwise, glue from the film will be stuck on the face of roller and it can be seriously damaged.
2.Turn the switch "Run" and Take up motor at the same time.
3.For warm lamination, set temperature from the hot mode.

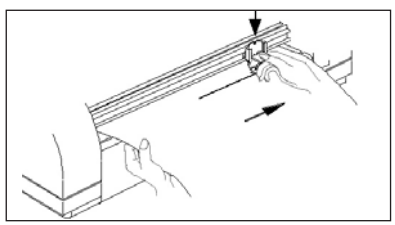
10. METHOD FOR USING CUTTER

— Cross Cutter —

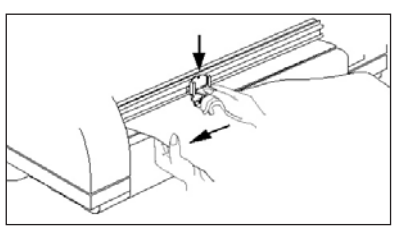


1. It is on the back side of the machine.

2. After lamination, move cutter to a point about 1/3 of the width of lamination.



3. Grasp film with one hand and press the cutter cut downward and slide it to the direction intending to cut with another hand.



4. Press the cutter and slide it the other way.

11. IMPORTANT SAFETY CONCERNS

1.Please be cautious that neck tie, necklace, long hair, clothes are kept well away while operation.

2. Prevent children from accessing the machine.
Extreme Heat Will Cause Injury.

3.Place the machines on the flat place.

4.Make certain that the machine is connected to an adequate power source.

5.Do not use any other purposes other than Lamination.

12. MAINTENANCE

Cleaning the Body of the laminator
Use damp (water only)cloth to wipe the body of the machine clean.
Removing Adhesive Build Up

1. Remove the film from the laminator.
2. Use a damp (water only) cloth and a rubber gum eraser to remove the adhesive on the Teflon (metal) and silicone rollers.

NOTE: Rub firmly but do not scrub the rollers vigorously as this may scratch the surface.Do not use sharp metal objects, steel wool, or abrasives,as these may also damage the rollers.

13. TROUBLESHOOTING

Symptom	Cause	Check point
Problem Cause Solution Machine will not turn on:	a.Power switch is in "0" (Off) position b.Tripped circuit breaker. c.Blown main power fuse.	a.Put the power switch to the "I" (On) position b.Reset the circuit breaker. c.Replace the fuse.
There is power, but the rollers are not turning after the "RUN" button is pressed:	a.Safety cover is not closed. b.Paper guide is not installed correctly. c.Blown motor fuse.	a.Close the safety cover to active the safety switch. b.Properly install the paper guide so that the micro switch is activated. c.Replace the motor fuse.
The unit is not heating up	a.The machine is in "COLD" mode. b.Set temperature is lower than the room temperature.	a.Switch to "HOT" mode. b.Raise the temperature according to the recommended film temperature. Curled lamination:
Curled lamination:	a. Upward curl. b. Downward curl.	a.Loosen the top roll film tension. b.Loosen the bottom roll film tension.
Unclear lamination:	The main roller temperatures are too low and/or lamination speed is too fast.	Raise the roller temperatures and/or lower the lamination speed.

14. SPARE PARTS

PART NAME	EA	REMARK	PART NAME	EA	REMARK
FUSE(65TS) (AC250V 10A) 	1	Power supply: 220V~240V	FUSE(65TS) (AC250V 20A) 	1	Power supply: 100V~120V

15. Speed & Temperature Adjustment

NO	Film thickness	Preset			User		Remark
		Temp	Speed	Func'No	Temp	Speed	
1	38 micron (1.5 mil)	100°C (212°F)	5	1			
2	75 micron (3 mil)	105°C (221°F)	4	2			
3	80 micron (3.2 mil)	105°C (221°F)	5	3			
4	100 micron (4 mil)	110°C (230°F)	4	4			
5	125 micron (5 mil)	120°C (248°F)	5	5			
6	150 micron (6 mil)	125°C (257°F)	3	6			
7	175 micron (7 mil)	130°C (266°F)	4	7			
8	200 micron (8 mil)	135°C (275°F)	3	8			
9	250 micron (10 mil)	140°C (284°F)	3	9			

Speed and temperature can be adjusted in accordance with the condition of laminating.

16. SPECIFICATIONS

Description	RSL-2702
Power supply	AC 100, 200, 220~240V 50/60Hz 120V 60Hz
Power consumption	1500W
Max. laminating width	685mm / 27"
Film thickness	25~250 mic / 1~10mil
Max. laminating speed	2.5m/min / 8.2ft/min
Ready time	10min
Heating method	Hot roller
Driving motor	DC geared
Max. Temperature control	150°C / 302°F
Speed control	9 settings
Transport type	4 Roller
Film core size	Auto grip (2",3")
Cooling system	2 AC FAN
Cross cutter	Yes
Hot lamination	Yes
Cold lamination	Yes
Mounting thickness	6mm / 0.24"
Take up system	Chain link to main motor
Reverse	Yes
Unit dimensions (w x d x h)	970 × 540 × 470 (mm) 38" × 21.5" × 18.5"
Unit weight	56kg / 124lbs
Carton dimensions (w x d x h)	1130 × 740 × 600(mm) 44.5" × 24" × 23.5"
Gross Weight	71kg / 157lbs